CENTER FOR TOXICOLOGY AND ENVIRONMENTAL HEALTH, LLC

CTEH® Project #40442
West Fertilizer Plant Explosion
Summary of Air Monitoring Results
April 22, 2013 16:00

This data report discusses real-time air monitoring data collected between 4/22/2013 04:00 and 4/22/2013 16:00 in support of remediation operations conducted near the West Fertilizer Plant Explosion in West, TX.

Real-time air monitoring was conducted for VOCs, ammonia (NH_3), nitrogen dioxide (NO_2), lower explosive limit (LEL) and oxygen (O_2) using remote-telemeting RAESystems® AreaRAEs and hand-held instruments including RAESystems® MultiRAE and Gastec® colorimetric detector tubes.

Tables 1 and 2 (below) display data summaries for hand-held and AreaRAE instruments, respectively. Site maps and charts are available as attachments.

Table 1: Hand-held Real-time Air Monitoring Summary[1]
April 22, 2013 04:00 – April 22, 2013 16:00

Analyte	Instrument	Number of Readings	Number of Detections	Average of Detections	Range of Detections
Rail Right of Way					
VOC	MulitiRAE	2	0	NA	< 0.1 ppm
Work Area					
Ammonia	Gastec 3L	6	6	1.1 ppm	0.5 – 1.5 ppm
	MultiRAE	3	1	2 ppm	2 ppm

[1] *Please note: The data displayed here has not undergone complete QA/QC analysis and is presented in a preliminary format.*
PPM = Parts Per Million

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Table 2
Stationary AreaRAE Monitoring Stations Data Logged
4/22/2013 04:00 to 4/22/2013 16:00

Unit	Analyte	Count of Readings	Count of Detections	Average of Detections	Max Detection
AR13	LEL	2689	0	NA	< 1 %
	NH3	2689	0	NA	< 1 ppm
	NO2	2689	0	NA	< 0.1 ppm
	O2	2689	2689	20.90%	20.9 %
	VOC	2689	45	0.1 ppm	0.1 ppm
AR14	LEL	2630	0	NA	< 1 %
	NH3	2630	0	NA	< 1 ppm
	NO2	2630	5	0.1 ppm	0.1 ppm
	O2	2630	2630	20.90%	20.9 %
	VOC	2630	0	NA	< 0.1 ppm
AR16	LEL	2545	0	NA	< 1 %
	NH3	2545	146	1 ppm	1 ppm
	NO2	2545	0	NA	< 0.1 ppm
	O2	2545	2545	20.90%	20.9 %
	VOC	2545	177	0.2 ppm	0.4 ppm
AR17	LEL	2199	0	NA	< 1 %
	NH3	2199	1787	1 ppm	2 ppm
	NO2	2199	0	NA	< 0.1 ppm
	O2	2199	2199	20.90%	20.9 %
	VOC	2199	241	0.6 ppm	1.2 ppm
AR18	LEL	2686	0	NA	< 1 %
	NH3	2686	0	NA	< 1 ppm
	NO2	2686	0	NA	< 0.1 ppm
	O2	2686	2686	20.90%	20.9 %
	VOC	2686	0	NA	< 0.1 ppm

[1] *The data in this table may include electronic drift. Drift is defined as any interference in the electrochemical sensor's ability to accurately report the concentration of a chemical in the atmosphere. Humidity and temperature changes throughout the monitoring period are typical sources of drift. Additionally, the data has not undergone complete QAQC as of this time.*

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Appendix

Air Monitoring Zone Classifications[1] April 22, 2013

Project: 40442
Client: OMI
City: West, TX
County: McLennan

[1] All monitoring performed outside of the Work Area boundary and the Rail Road right of way is considered Community Monitoring.

Projection System: *UTM Zone 14* Coordinate System: *WGS84* Print Date: *4/22/2013*

AreaRAE Monitoring Station Locations
4/22/2013 04:00 to 4/22/2013 16:00

Project: 40442
Client: OMI
City: West, TX
County: McLennan

Projection System: *UTM Zone 14* Coordinate System: *WGS84* Print Date: *4/22/2013*

Manually Logged Ammonia
Real-Time Readings
4/22/2013 04:00 to 4/22/2013 16:00

Project: 40442
Client: OMI
City: West, TX
County: McLennan

Projection System: *UTM Zone 14* Coordinate System: *WGS84* Print Date: *4/22/2013*

Manually Logged
Real-Time Readings
4/22/2013 04:00 to 4/22/2013 16:00

Project: 40442
Client: OMI
City: West, TX
County: McLennan

Projection System: *UTM Zone 14* Coordinate System: *WGS84*

Print Date: *4/22/2013*

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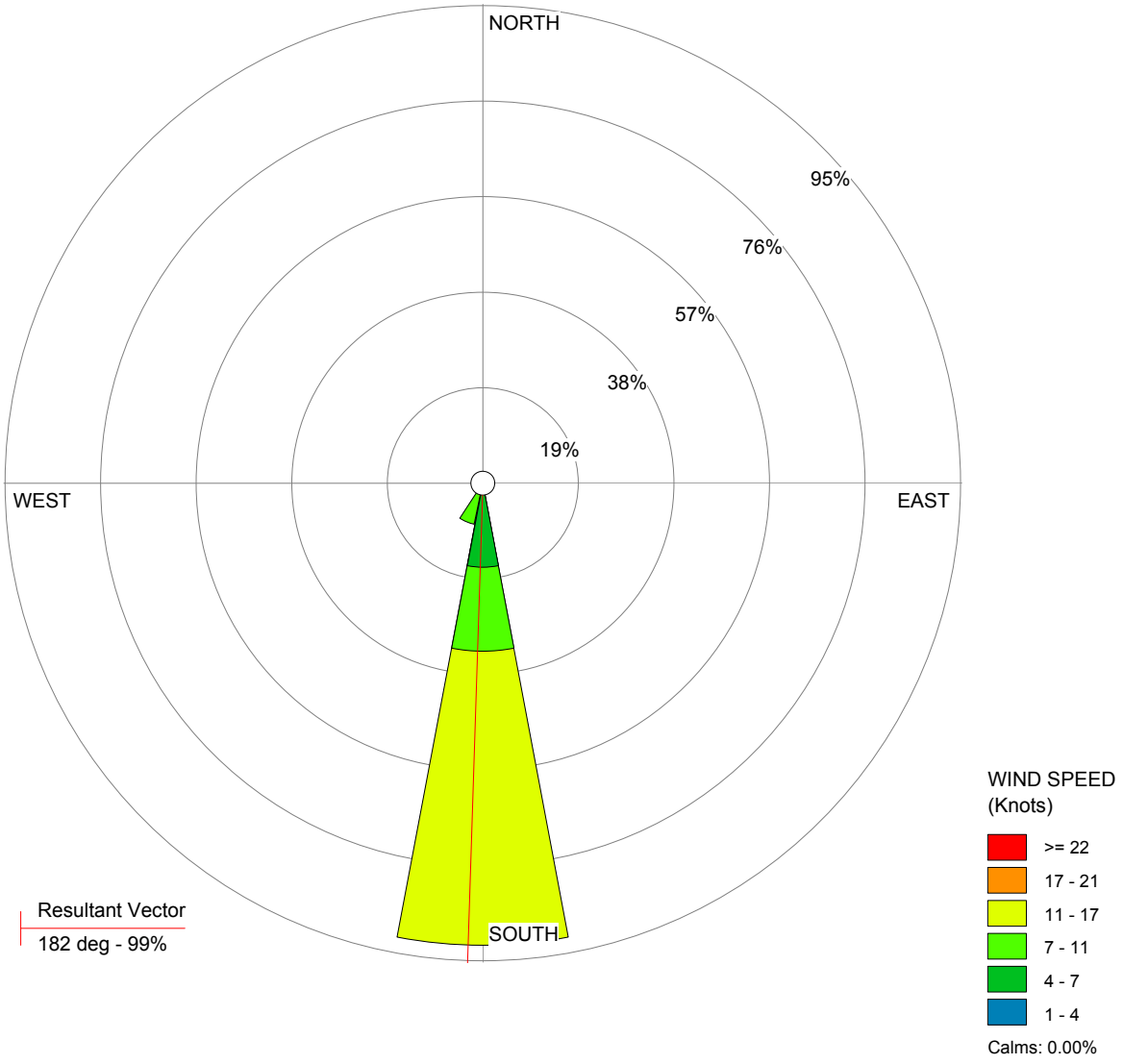
AreaRAE Detections
4/22/2013 04:00 to 4/22/2013 16:00

WIND ROSE PLOT:

Wind Speed and Direction 4/22/2013 04:00 to 4/22/2013 16:00
West, Tx

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

Met Station: KACT Waco, Tx

COMPANY NAME:

CTEH

MODELER:

Jason Callahan

CALM WINDS:

0.00%

AVG. WIND SPEED:

10.67 Knots

PROJECT NO.:

40442 - OMI